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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/677,288 10/02/00 FRANK

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EXAMINER

MMC2/0213

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ART UNIT

PAPER NUMBER

2834

DATE MAILED:

02/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/677,288

Applicant(s)

FRANK, ANDREW A.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 18) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Specification

- ✓ 1. The disclosure is objected to because of the following informalities: In page 11, lines 9-13, applicant refers to figure 7 which indicates that the electric motor is at the rear and the CVT at the front, but figure 7 shows the electric motor at the front and the CVT at the rear according to rear wheel 62 and front wheel 58.

Appropriate correction is required.

Drawings

- ✓ 2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "12" and "14" have both been used to designate clutch. Correction is required.
- ✓ 3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "34". Correction is required.

Claim Rejections - 35 USC § 112

- ✓ 4. The following is a quotation of the first paragraph of 35 U.S.C. 112:
- The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
- ✓ 5. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one

skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 21 discloses the "motor to be on an ideal operating line". Is the applicant stating that the invention is perfect by stating that the motor can operate ideally and that it can output an ideal (perfect) torque?

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4-11, 15-20 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- ✓ In claims 4, 9, 15, 20 and 22 applicant discloses a power output "in accordance with predetermined operating characteristics". Which characteristics are these that can set a power output?
- ✓ In claims 6 and 18, applicant discloses a change of ratio of the transmission, which has a controlling rate of change of ratio. Is applicant disclosing two changes of ratio for the transmission? Or, a change of ratio within a change of ratio which both changes of ratio seem to be independent of each other? Or, are they dependent on each other?
- ✓ In claims 7, 10 and 19, applicant discloses that the transmission is a continuously variable transmission. Is that means that the transmission will be working at all times when the vehicle is running in combustion mode? Hybrid/electric mode?

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6054844. Although the conflicting claims are not identical, they are not patentably distinct from each other. For example, in claim 1 of the patent 6054844, it stated that a "control means" is used for varying the torque output of the motor and in application 09677288, a similar device is disclose, which is a "motor controller". Also, in U.S. Patent No. 6054844 and application 09677288, both disclose a motor, generator, motor/generator, generator/motor, shaft, a transmission system, and controllers for the motor and generator.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

11. Claims 1-11, 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ibaraki et al.

Ibaraki et al discloses an apparatus for controlling the power at the output of an internal combustion engine, comprising an electric motor 14 coupled to the engine and a motor controller 28. Also the motor 14 comprises a motor/generator 34 and the motor controller varies positive and negative output torque (column 24, lines 1-5) and the motor 14 is coupled to a transmission 16 and the transmission is controllable comprising means for controlling the rate of change of ratio (column 24, lines 53-55). Moreover the transmission is automatic and variable (column 25, line 20) and the motor 14 is between engine 12 and transmission 16. Also, the control apparatus 28 has an electric motor 14 driving a transmission 16 and a battery system 36 powering the electric motor 14 comprising an electric motor controller 28 connected to electric motor 14. Moreover, Ibaraki et al discloses an engine controller 42-48 connected to combustion engine.

12. Claims 12-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi.

Yamaguchi discloses a generator 3 coupled to the output of engine 2 and a generator controller 12. Also Yamaguchi discloses that the generator comprises a generator/motor (see figure 1) and that the controller varies positive and negative output torque in accordance to predetermined characteristics (column 17, lines 23-25).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 12, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibaraki et al in view of Yamaguchi.

Ibaraki et al discloses an apparatus for controlling the power at the output of an internal combustion engine, comprising an electric motor 14 coupled to the engine and a motor controller 28. Also the motor 14 comprises a motor/generator 34 and the motor controller varies positive and negative output torque (column 24, lines 1-5) and the motor 14 is coupled to a transmission 16 and the transmission is controllable comprising means for controlling the rate of change of ratio (column 24, lines 53-55). Moreover the transmission is automatic and variable (column 25, line 20) and the motor 14 is between engine 12 and transmission 16. Also, the control apparatus 28 has an electric motor 14

driving a transmission 16 and a battery system 36 powering the electric motor 14 comprising an electric motor controller 28 connected to electric motor 14. Moreover, Ibaraki et al discloses an engine controller 42-48 connected to combustion engine and a motor/generator coupled to drive shaft

However Ibaraki does not disclose a generator and a generator controller which can function as part of the transmission.

On the other hand, Yamaguchi discloses a generator 3 and a generator controller 12 for the purpose of generating and controlling electricity, which the generator and generator controller are part of the transmission system (see figure 1).

It would have been obvious to one having ordinary skill in the art to make a system using an electric motor with a transmission coupled to a combustion engine and a controller as disclosed by Ibaraki et al and to use a generator and a generator controller for the purpose to generate and control electricity as disclosed by Yamaguchi.

15. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al in view of Kawakatsu et al.

Yamaguchi discloses a shaft 25 coupled to the transmission and a generator/motor 3 coupled to engine 2, and a generator/motor controller 12 connected to generator 3 and a battery 4 connected to generator/motor controller 12. Also, Yamaguchi discloses a motor controller 12 connected to the motor 3.

However Yamaguchi does not disclose a motor/generator coupled to a shaft and wheels involve in the transmission system.

On the other hand Kawakatsu et al discloses a drive shaft 9 coupled to motor/generator 3 (column 4, lines 63-67) and a battery 49 connected to the motor/generator 3 for the purpose to supply voltage to a the car's computer. Moreover, the motor/generator and motor/generator controller are part of the transmission system (see figure 3). Also, the transmission has an output driving a first wheel 17 at a first end of vehicle wheel and an electric motor 3 driving a second wheel 21 at a second end of vehicle. Also, the control means is used for varying the torque output (column 22, lines 18-22).

It would have been obvious to one having ordinary skill in the art to couple a shaft to the transmission system and couple a generator/motor to the engine as disclosed by Yamaguchi and to use a first wheel and a second wheel, a motor/generator and a motor/generator controller and a battery for the purpose to supply voltage to the car's computer as disclosed by Kawakatsu et al.

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Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

February 8, 2001


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